

REMARKS

By this amendment, claim 8 has been amended to more particularly define the invention and clearly distinguish over the prior art of record. Claims 1-7 have previously been cancelled. Accordingly, claims 8-13 are currently active in this application, of which claim 8 is independent.

Applicants respectfully submit that the above amendments do not add new matter to the application and are fully supported by the specification. Support for the amendments can be found on page 17, lines 12-19. In view of the above Amendments and the following Remarks, Applicants respectfully request reconsideration and withdrawal of the objections and rejections for the reasons discussed below.

Rejection of Claims under Double Patenting

Claims 8, 12, and 13 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11 and 14 of U. S. Patent No. 6,541,730 issued to Nam et al. ("Nam") in view of U.S. Patent No. 5,622,540 issued to Stevens ("Stevens"). Applicants respectfully traverse this rejection for at least the following reasons.

Claim 8, as amended, provides an apparatus for cutting a non-metallic substrate, "wherein the apparatus cuts the non-metallic substrate without a cooling device."

Nam fails to teach all the features of claim 8. As stated by the Examiner in the Office Action, Nam teaches using a cooler that applies a cooling fluid.

The secondary reference Stevens does not fill the deficiencies of the primary reference, Nam. As stated by the Examiner, Stevens also describes using a water coolant applied through a water jet to enhance the stress distribution and enhance crack propagation in Col. 3, lines 65-67. Hence, Stevens does not provide an apparatus that cuts a non-metallic substrate without using a cooling device.

The proposed combination of Nam and Stevens fail to teach the limitations of claim 8, as amended. Thus, Applicants respectfully submit that claim 8, and those claims that depend therefrom are patentable over Nam and Stevens.

Accordingly, Applicants respectfully request withdrawal of the double patenting rejection of claims 8, 12, and 13.

Rejection of Claims under 35 U.S.C. §102

Claims 8, 9, 11, and 13 stand rejected under 35 U.S.C. §102(b) as anticipated by Applicants' own admissions found in the specification, page 5, lines 1 - 18. Applicants respectfully traverse this rejection for at least the following reasons.

As stated above, claim 8, as amended, provides an apparatus for cutting a non-metallic substrate that functions without using a cooling device. In contrast, the Applicants' admitted prior art describes an apparatus, as shown in FIG. 1, that uses a cooling fluid beam 14 in order to generate a crack on the surface of a substrate, see p. 5, lines 5-8.

Therefore, the Applicants' admitted prior art fails to provide all the features of claim 8, as amended. Applicants respectfully submit that claim 8, and those claims that depend therefrom are patentable over their admitted prior art.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(b) rejection of claims 8, 9, 11, and 13. Since none of the other prior art of record, whether taken alone or in combination, discloses or suggests the claimed subject matter, it is respectfully submitted that claims 8, 9, 11, and 13 are allowable, and prompt notification thereof is respectfully solicited.

Rejection of Claims under 35 U.S.C. §103

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants' own admission in view of U.S. Patent No. 6,320,158 issued to Kitajima et al. ("Kitajima"). Applicants respectfully traverse this rejection for at least the following reasons.

As stated above, the Applicants' admitted prior art does not provide all the features of claim 8, as amended.

In addition, the secondary reference Kitajima does not fill the deficiencies of the primary reference, the Applicants' admitted prior art. Kitajima merely relates to a method of forming bumps onto a chip having electrodes. While Kitajima describes the use of a fourth harmonic YAG laser, it does not provide an apparatus for cutting a non-metallic substrate, "wherein the apparatus cuts the non-metallic substrate without a cooling device," as stated in claim 8.

Accordingly, the proposed combination of the Applicants' admitted prior art and Kitajima fails to teach the features of claim 8 and those claims that depend therefrom.

Applicants respectfully submit that claim 8, and those claims that depend therefrom are patentable over the proposed combination of their admitted prior art and Kitajima.

Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants' own admission in view of U.S. Patent No. 6,841,482 issued to Boyle ("Boyle"). Applicants respectfully traverse this rejection for at least the following reasons.

As stated above, the Applicants' admitted prior art does not provide all the features of claim 8, as amended.

In addition, the secondary reference Boyle does not fill the deficiencies of the primary reference, the Applicants' admitted prior art. Boyle merely relates to a method for machining a material wherein the first laser beam achieves material removal while the second laser removes material from the edges to provide a smoother profile. See Col. 3, lines 57-60.

Accordingly, the proposed combination of the Applicants' admitted prior art and Boyle fails to teach the features of claim 8. Applicants respectfully submit that claim 8, and those claims that depend therefrom are patentable over the proposed combination of their admitted prior art and Boyle.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 10 and 12. Since none of the other prior art of record, whether taken alone or in combination, discloses or suggests the claimed subject matter, it is respectfully submitted that claims 10 and 12 are allowable, and prompt notification thereof is respectfully solicited.

Conclusion

Applicants believe that a full and complete response has been made to the Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully Submitted,


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